first order frequency that is within about three hundred Hertz of said median first order frequency.

54. The method of claim 53 wherein each of said at least one hundred motor components with a phase change material thereon has a first order frequency that is within about one hundred Hertz of said median first order frequency.

55. The method of claim 53 wherein each of said at least one hundred hard disc drive components with a phase change material thereon has a first order frequency that is within about thirty Hertz of said median first order frequency.

56. The method of claim 46 wherein the resonance spectra of said plurality of motor components with phase change material thereon have a standard deviation of first order resonance frequency that is at least about twenty five percent less than the standard deviation of first order resonance frequency for the same number of the same components over-molded with an injection molding process wherein only the injection pressure and either the injection time or stroke of an extrusion screw are controlled.

57. The method of claim 46 wherein the resonance spectra of said plurality of motor component sets with phase change material thereon have a standard deviation of first order resonance frequency that is at least about fifty percent less than the standard deviation of first order resonance frequency for the same number of the same components over-molded with an injection molding process wherein only the injection pressure and either the injection time or stroke of an extrusion screw are controlled.

58. The method of claim 1 wherein the phase change material has a coefficient of linear thermal expansion of less than $2x10^{-5}$ in/in/°F throughout the range of 0°F to 250°F.

59. The method of claim 1 wherein the phase change material has a coefficient of linear thermal expansion in the X, Y and Z directions, wherein the coefficient of linear thermal expansion is lowest in the X direction, and wherein the coefficient of linear thermal expansion in the Y and Z directions is no more than four times the coefficient of linear thermal expansion in the X direction.

60. A method of reducing sympathetic system wide resonances of components in a hard disc drive comprising:

a) providing a hard disc drive component;

b) determining a desired resonance spectrum of said hard disc drive component;

c) placing said hard disc drive component in a mold cavity of an injection molding machine having a controllable fill rate and a controllable injection pressure;

d) closing said mold cavity;

e) injecting a molten phase change material into said mold cavity at a fill rate and an injection pressure;

f) monitoring the pressure in the mold cavity; and

g) controlling the fill rate of said molten phase change material and injection pressure to obtain said hard disc drive component with the phase change material thereon, having said desired resonance spectrum.

61. The method of claim 60 wherein said desired resonance spectrum is achieved by tuning the fill rate and pressure to a predetermined set-point fill rate and a predetermined set-point pressure.

62. A method for injection molding a layer of phase change material around a surface of a plurality of identical hard disc drive components comprising:

a) providing a plurality of hard disc drive components;

b) placing one of said plurality of hard disc drive components in a mold cavity of an injection molding machine having a controllable fill rate and a controllable injection pressure;

c) closing said mold cavity;

d) injecting a molten phase change material into said mold cavity at desired fill rates and injection pressures;

e) monitoring pressure in the mold cavity;

f) controlling the injection pressure of said molten phase change material to obtain said hard disc drive component with the phase change material thereon having a reproducible resonance spectrum; and

g) repeating steps b)-f) to produce said plurality of components each having a substantially uniform resonance spectrum.

63. The method of claim 62 wherein the pressure is monitored at a runner to the mold cavity, a beginning-of-fill point and an end-of-fill point.

64. The method of claim 62 further comprising the step of controlling the fill rate of said molten phase change material to obtain said hard disc drive components with the phase change material thereon.